

A

PROBATIONARY  
SURGICAL ESSAY,  
ON  
OPHTHALMIA,

SUBMITTED

BY AUTHORITY OF THE PRESIDENT AND HIS COUNCIL,  
TO THE EXAMINATION OF THE

*ROYAL COLLEGE OF SURGEONS  
OF EDINBURGH,*

WHEN CANDIDATE

FOR ADMISSION INTO THEIR CORPORATION,

IN CONFORMITY

TO THEIR REGULATIONS RESPECTING THE ADMISSION

OF

*ORDINARY MEMBERS.*

BY

JOHN HENRY WISHART,

SURGEON.

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“Ingentibus vero et variis casibus oculi nostri patent. Qui cum  
magnam partem ad vitæ simul et usum et dulcedinem conferant  
summa cura tuendi sunt.”

CELSUS DE MEDECINA.

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TO  
JAMES RUSSELL, ESQ;

CLINICAL PROFESSOR OF SURGERY

IN THE  
UNIVERSITY OF EDINBURGH,

&c. &c.

AS A TESTIMONY OF GRATITUDE  
FOR THE BENEFITS BESTOWED ON HIM IN  
THE STUDY OF HIS PROFESSION,

AND  
OF REGARD FOR MANY MARKS OF DIS-  
INTERESTED FRIENDSHIP,

THIS ESSAY  
IS RESPECTFULLY DEDICATED

BY THE  
AUTHOR,







AN  
ESSAY  
ON  
OPHTHALMIA.

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**T**HE general name of Ophthalmia has been applied to all those diseases of the eye, in which there is an increased number of red vessels. Various subdivisions and many species have been described by authors, from the different parts of the organ which the disease attacks, from peculiarities in appearances and symptoms, and from pre-conceived notions of the proximate cause.

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In order to avoid multiplicity of description, and at the same time to study perspicuity, I shall in the present Essay treat of the Ophthalmia under two principal divisions, and afterwards consider those species which belong to these respective orders.

The acute Ophthalmia, which comprehends the first division, is sometimes confined to the vessels of the conjunctiva; in other cases, it extends to the sclerotica and cornea, and when it is still more violent, it attacks the internal parts of the ball.

This disease is accompanied by the usual phenomena of inflammation in general, and by a series of symptoms arising from the peculiar structure and functions of the eye as the organ of vision. When slight, it is seldom attended by general fever, or only by a moderate accession towards evening; and the febrile affection always varies according to the degree of violence of the other symptoms.

The most remarkable changes to be observed on examining the eye are, an unusual redness of the conjunctiva, from the vessels being preternaturally distended, and from an increase in their number. They are never so numerous as not to allow



allow each trunk to be distinguished ; they usually advance in a more or less straight direction towards the cornea ; and they are always of a bright red colour ; the pupil is contracted, and the cornea becomes cloudy. The general aspect of the eye is changed ; it loses its expression and lustre, and appears as if glazed. There is either an increased flow of tears, which are acrid and excoriate the eye-lids and cheek, or the natural secretion is diminished, and there is a most uneasy dryness and want of mobility in the eye-ball and its coverings.

The patient complains of pain, heat, and itchiness, as if a mote were in his eye ; his sight is impaired ; and the pain is increased on looking at any object, or on exposing his eye to a bright light. He complains more or less of weight or pain in his forehead and temples : sometimes he imagines there are flies or black spots moving before his eyes. The inflammation generally begins in the external parts of the eye and proceeds inwards : sometimes it begins in the internal parts and proceeds outwards, but that is not so frequent an occurrence. It sometimes affects both eyes at the same time,



time, or goes from the one to the other alternately ; and an eye, which has been once inflamed, generally retains a predisposition to new inflammations.

These are the most usual train of symptoms attending the acute Ophthalmia in its milder form ; and in many cases they do not even proceed so far, and are less numerous : but, on other occasions, besides the symptoms already mentioned, there occur others which denote a most violent and advanced form of the disease. The febrile affection is very severe : the patient complains of burning heat, and of a stinging beating pain in the eye, in the brows and temples, and even extending to the back part of the head : the secretion of tears is very copious, and they are extremely hot and acrid : the number of blood-vessels is greatly increased : the conjunctiva swells and projects over the cornea, resembling a piece of red cloth : there is often an effusion of blood into the anterior chamber, and frequently pus is formed in it, or between the layers of the cornea, producing an ulceration of that coat, which at last bursts, allowing the discharge of the humours,



mours, and is followed by the total loss of the organ of sight.

Ophthalmia may last longer or shorter according to circumstances; yet, in its greatest severity or longest continuance, it never terminates by gangrene, seldom in suppuration, but most generally by resolution. This, however, must not be trusted to nature, but its termination ought to be carefully watched, as it is very apt to produce specks upon the cornea, adhesions of the iris, and other disorders occasioning a partial or total loss of vision. The resolution is rarely connected with any critical evacuation, except sometimes a diarrhoea, which has introduced the practice of strong purging in the cure of it; and this is in many cases very hurtful. Ophthalmia frequently becomes habitual, especially in subjects of a scrophulous habit.

In whatever degree Ophthalmia may have appeared, and whatever may have been its duration, there is always perceived a considerable change in some of its symptoms and appearances before it is totally removed. This change denotes the commencement of the chronic stage of this disease, or of the chronic Ophthalmia. It is indicated by the abatement of the more distressing symptoms,



symptoms, as the fever, pain, flow of tears, and the intolerance of light. The vessels, which had been diminishing both in size and number, are now observed to become more numerous and more distended: the colour, from being of a bright red, changes to a darker hue, and is more of a purple cast: the vessels, instead of advancing in straight lines to the transparent cornea, become tortuous, anastomose, intersect each other, and form a kind of net-work: the eye becomes dull and heavy, and the cornea seems more or less opaque.

Obscurities of the cornea are a constant symptom in this disease; and they appear in various degrees of extent and opacity. There are generally clusters of blood-vessels on the conjunctiva covering the sclerotica adjoining to the spec; and one or two trunks are usually perceived passing into its substance; and if the progress of them is not soon arrested, they prove an incurable, or at least a very obstinate obstruction to the recovery of the sight.

The causes that produce Ophthalmia are very various. Whatever is capable of bringing on inflammation in other parts, is also capable of producing it in the eye. But the peculiar structure  
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of the organ renders it liable to be affected by causes which have no influence on other parts of the body; such as, the sudden exposure to a bright light, as the light of the sun, or the dazzling reflexion of a well lighted room, or of a country covered with snow: frequent and sudden variations of temperature; removing from a very warm to a very cold room; travelling in summer in marshy or dusty places, and such like circumstances. It is also not unfrequently observed to prevail epidemically, affecting all ages and sexes. Blows, wounds, and punctures of the eye, produce various degrees of inflammation according to their violence or extent, and they not unfrequently cause an instant and total loss of sight. Smiths are peculiarly liable to these accidents from sparks or splinters of hot iron flying into the eye.

An extravasation of blood under the conjunctiva, similar to the chemosis, is very often produced by blows or wounds of the eye. Similar effusions often arise without any evident cause, or are preceded by a violent fit of coughing, or some sudden exertion; but they are never attended with any pain, and do not affect the sight.

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The total or partial inxertion of the eye-lashes is not an unufual caufe of Ophthalmia.

Foreign bodies entangled in the eye, or under the lids, are likewise a frequent caufe of inflammation. They occafion great uneafinefs, difficulty in moving the eye-lids, and a copious fecretion of tears. The action of the eye-ball and palpebrae with the flow of tears generally removes them; but fometimes it is neceffary to inject a little tepid water between the eye-lids, or to immerfe the eye in an eye-cup containing rofe water, or any mild fluid. If the body is not difengaged by thefe means, it may often be removed by turning the eye-lids outwards, and wiping it off with a hair pencil, or with a bit of lint wrapped round the point of a fmall probe. If it is firmly fixed in the cornea, it may be extracted with the point of a couching needle or of a common probe.

Tumours fituated on the edges or on the infide of the eye-lids, by the preffure and constant irritation which they keep up, are a frequent caufe of Ophthalmia, which can never be cured till thefe tumours are removed.

Whatever caufes a determination of blood to the head, or prevents its return, alfo produces inflammation



inflammation of the eyes. Intemperance, particularly in the use of spirituous liquors, frequently brings on a habitual state of this disease. In some cases, the cause is situated in the stomach, or *primae viae*, arising from the presence of worms or impurities. This species is attended by nausea, tendency to vomit, and an aversion to all kinds of food ; partial pain of the head, foul tongue, foetid breath and flatulency. The repulsion of cutaneous eruptions, and the suppression of any habitual or periodical evacuation, such as the menses in women, the haemorrhoidal flux in men, are also occasionally causes of Ophthalmia.

In the small-pox and measles, the eyes are almost always affected with an Ophthalmia. In the former, the eye-lids partake of the general swelling of the face, and are commonly glued together by the viscid mucous exudation, which, when allowed to collect within them, frequently causes ulceration and abscesses of the cornea. In the latter, there is always a considerable degree of redness of the conjunctiva, with a copious flow of hot tears and pain on exposure to light.

There are two other species of Ophthalmia belonging to the order of the acute, which deserve



to be particularly noticed, viz. The Gonorrhoeal Ophthalmia, and that which attacks infants soon after birth, called Ophthalmia Purulenta Infantum. They both appear with very violent inflammatory symptoms, swelling of the conjunctiva and eye-lids, but they are soon accompanied by a copious flow of matter, of a purulent appearance, from the eyes.

The Gonorrhoeal Ophthalmia arises from two different causes. The first is the suppression of a virulent gonorrhoea; or, we observe, that when the discharge from the urethra disappears, the disease begins in the eye. The second originates from the gonorrhoeal virus inadvertently transferred, and immediately applied to the eye itself.

In the first case, the Ophthalmia begins with great swelling of the conjunctiva and eye-lids, followed by an abundant and continual flow of yellowish green matter similar to that of a gonorrhoea; it is accompanied by great fever, restlessness, burning heat, and intense pain of the eyes and head. There is also great aversion to light; frequently matter similar to the discharge is effused into the chambers of the eye; and the disease commonly terminates by opacity or ulceration.



ration of the cornea, with the escape of the humours and total loss of the eye.

In the second instance, there is a similar train of symptoms, but they are not so violent, and the inflammation is not so dangerous as in the former.

Some writers are of opinion that, in the first case, there is an actual metastasis of the gonorrhoeal matter from the urethra to the eye. But others by no means approve of this theory, and certainly not without great reason ; because the sudden suppression of gonorrhoea is not always followed by Ophthalmia ; on the contrary, it may be considered as a rare occurrence, compared with the frequency of cases of suppressed gonorrhoea, and the more common consequences of that suppression ; and, further, the Ophthalmia arising from the insertion of the virus, (in which case there can be no doubt with regard to the cause of the disease,) is never attended with such danger to the organ of vision as that from metastasis ; perhaps this may arise from some peculiar sympathy similar to that which we often observe to subsist between other parts of the body.

The second species of purulent Ophthalmia, or that which attacks new born infants, has a very  
great



great resemblance to the former, (although the cause is very different) in the history of the symptoms, and the rapidity of their course. The eye-lids are greatly swelled, frequently to such a degree that they cannot be separated from each other, so as to allow the state of the eye to be examined for many days. Sometimes, during a fit of crying, the eye-lids are spontaneously averted, and are found to have a villous fungous appearance, and, if not inverted again, they remain in that position. In two or three days, when the violence of the inflammation has abated, there is a copious discharge of puriform looking fluid from the meibomian glands and inside of the eye-lids. When the disease advances still farther, the cornea ulcerates, and allows the humours to escape and the eye-ball sinks. If the fever at the beginning is violent, it is generally accompanied by vomiting and diarrhoea of a very fetid nature.

The last variety of the Ophthalmia is that which occurs in people of a scrophulous constitution. It is always of a chronic nature. The redness of the conjunctiva has always a dull livid colour; the vessels on it run in an irregular direction towards the transparent cornea, and frequently



quently pass over it; the cornea becomes muddy, and specs form over it; the edges of the eyelids are red, swelled, hard, often ulcerated, and the cilia drop off, and the whole eye has a disagreeable red appearance. The pain is not great; and except when the inflammation is very violent, the eyes endure exposure to light without uneasiness. There is generally a mucous exudation, which forms crusts on the tarsi, and they usually adhere slightly in the morning.

The prognosis in Ophthalmia depends much on the cause by which it is produced. If the disease is recent, and brought on by an external cause or simple plethora, it yields readily to the use of local remedies and general evacuations; but if it has been neglected, or improperly treated, the cure is sometimes very difficult. In general, chronic inflammations, although not so liable to occasion a loss of sight, are much more difficult of cure than the acute, as their causes are more complex and obscure. The internal Ophthalmia is usually attended with more danger than the external. But the symptoms vary so much in every case, that it is not easy to draw any general conclusion.

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The cure of the Ophthalmia differs considerably, according to the nature of the cause by which it is produced, and according to the constitution of the patient. There are, however, some indications applicable to every variety: therefore it will be proper to premise a few general observations, and then proceed to the consideration of those in which a different course is required.

In all inflammations of the eye, it is of importance to exclude the accession of light and the influence of a current of air. They both act as an irritation, and tend to increase the violence of the disease; they are more especially hurtful when the eye is very impatient of light. The common mode of applying a thick compress secured by a bandage is very prejudicial, as it is apt to irritate the eye, to keep it too hot, and, by absorbing the tears and mucous, it keeps the eye and neighbouring parts constantly moist, which, in some cases, must be carefully avoided. The fixing a thin compress of linen or of green silk to the nightcap, or to a bandage passed round the head, and allowing it to hang down over the eye, is preferable to every other mode. Even when one eye only is affected, care should be taken to keep them both covered;



covered ; for, from the peculiar sympathy which subsists between them, the exposure of a sound eye to the light, or the exerting it in looking at objects while the other is inflamed, almost always proves hurtful to both. Sometimes the tears collect within the eyelids, and they appear as if aedematous : in such a case, it will be proper to separate them from each other two or three times a-day, and to introduce between them any mild ointment to prevent this adhesion. External local remedies are best applied in the form of eye-waters : salves or ointments are apt to adhere to the edges of the eyelids, or among the cilia, and increase the irritation. Great disputes have prevailed among practitioners whether these lotions should be employed warm or cold. It is a general notion, that warm applications tend to relax and weaken the part, while cold ones strengthen and invigorate it. But, as has been remarked by Mr Ware \*, weakness is not unfrequently the result of pain, and is often occasioned by the distention of the vessels not only of those conveying red blood, but also of the lymphatics: and, therefore, whatever tends to relieve pain and to remove

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\* Chirurgical Works, second edit. Vol. I.

remove the fulness of the vessels contributes to restore strength. Weakness, again, is sometimes the result of too great tightness or stiffness in parts that are formed for a greater or less degree of contractile action ; therefore, on this principle, the use of warm applications, when the eye feels morbidly dry, may be accounted for.

However proper warm applications may be in the commencement of the Ophthalmia, their use ought not to be continued too long, as there are many cases in which they are hurtful, and where cold remedies are more useful. Upon the whole, the best general rule we can lay down, is to consult the feelings of the patient, and to make the collyria warm or cold as may be most agreeable to him. There are some cases of Ophthalmia, in which moist applications are hurtful ; these generally occur in rheumatic or gouty persons ; but it is difficult to give any general rule ; a short trial will soon ascertain it.

I shall now proceed to the further consideration of the simple acute Ophthalmia, or that which is not connected with any peculiarity in the constitution, requiring a modification of the usual treatment.

If the inflammation is slight, it may often be readily cured by a proper attention to diet ; the  
occasional



occasional use of gentle purges, and by the application of some mild lotion externally. If there appears to be any connection with the state of the stomach, the exhibition of an emetic will contribute much to the removal of the cause of the disease; and if it be occasioned by the suppression of any habitual evacuation, endeavours must be made to restore it. This treatment generally succeeds in the course of a few days; which is easily ascertained by the abatement of the pain and other symptoms, and by the increase of the mucous discharge. At this period, though the eye still appears red, the former applications must be discontinued, and mild astringents ought to be substituted; such as a weak solution of white vitriol or sugar of lead, in the proportion of one grain to the ounce of any simple distilled water.

If the inflammation is violent, it requires a very strict observance of the antiphlogistic regimen. Experience indeed has shewn, that timidity in the use of evacuations of blood is often the cause of the loss of the eye. In every case therefore when the pulse is full or strong, blood ought to be taken freely from the arm, from a large orifice; as in all inflammations, sudden evacuations

of blood are much more beneficial than when it is taken in a slow and gradual manner. Ten or twelve ounces may be taken at first from a strong healthy patient ; and if the inflammatory symptoms continue, it may be repeated after the interval of a few hours, or as often as may appear necessary. Local bleeding is also highly useful ; it may be done either by leeches, cupping, or opening some blood vessel in the vicinity of the eye, or by scarifying the eyelids. If leeches are to be employed, six or more should be used, in order to cause a quick and copious discharge ; for when a small number is applied, they are apt to increase the congestion in the head, and add to the general irritation. They ought not to be applied too near to the eye, as the wounds which they make are in some patients a source of great uneasiness, and also as they are equally serviceable when applied to the hollow of the temple. The opening the temporal artery is a very effectual and speedy mode ; though the quantity of blood required is sometimes obtained with difficulty, the complete division of that artery on the side affected is often found to stop the progress of the inflammation when every other remedy has failed. Opening the vein which passes on the in-

side



side of the nose has not unfrequently afforded considerable relief.\* If the Ophthalmia has appeared in consequence of, or subsequent to, the suppression of any periodical evacuation of blood, as, bleeding from the nose, from the haemorrhoids or the menstrual discharge, it has been recommended, instead of leeches in the vicinity of the eyes, to apply them in the first case to the alae nasi, in the second to the haemorrhoidal vessels, and in the last to the inside of the labia pudendi.

If the conjunctiva is very much swelled, or in the state of what is called chemosis, no remedy is so effectual as the division or excision of a portion of it with a pair of crooked scissors near the edge of the transparent cornea. The haemorrhage from the divided vessels greatly relieves the patient, and takes off the distension of that membrane. The scarification of the inside of the eyelids with a lancet, or even the removal of a small portion of the membrane lining them, is also a very effectual remedy.

After

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\* Ware, Chirurgical Observations, vol. 1, p. 39, note.

After the free discharge of blood, there is no remedy so useful as the application of a blister. There has been some difference of opinion with regard to the part where it is best they should be used, but I believe they are of much more benefit when applied over the eye-lids, or temples, than on any part at a greater distance.

Besides the general and topical discharge of blood, the bowels ought to be evacuated by gentle laxatives, such as cream of tartar, soluble tartar, Rochelle salts, or the like ; but strong drastic purges ought to be carefully avoided, as they debilitate the patient too much.

The remedies to be applied to the inflamed eyes should consist in fomentations of any mild emollient; as an infusion of elder flowers, or marsh mallow, to be renewed every two or three hours. For removing the heat of the eyes, nothing is so effectual as the introducing, on the point of a hair pencil, a little of the white of a fresh egg between the eye and the lids. The patient should be kept in bed with his head much elevated, and remain quiet to promote the general perspiration. When the eye-lids have a tendency to adhere, a little of any mild ointment should be introduced between them, particularly in the evening, as  
nothing



nothing aggravates the irritation more than the collection of the tears under the eye-lids.

By employing these remedies, the inflammatory stage of the acute Ophthalmia is generally subdued. This is indicated by the disappearance of the fever, and by the abatement of the burning heat and pain ; the discharge from the eye, which at first was acrid, thin, and watery, becoming mild, and more of a mucous nature ; or, if the eyes were quite dry, they now become moist, and the patient is able to bear the light, and to move the eye-lids without uneasiness.

On the appearance of these symptoms, altho' the eye still seems red, the use of the emollient applications should be discontinued, and in their stead may be substituted astringent and gently stimulating collyria, as the solution of sugar of lead, or of white vitriol in distilled water, with the addition of a few drops of camphorated spirit of wine. Although these applications should generally be used cold, yet there are some patients who, especially in cold weather, cannot endure any thing cold applied to the eye. In these cases, it will be proper to use the same collyria with the precaution of making them at first a little warm, and, as has been already remarked, to regulate  
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the heat according to the feelings of the patient.

Another remedy peculiarly serviceable in this period of the disease is Opium. Various forms of applications have been tried, but that which is most generally recommended is the *Tinctura Opii Vinosa* of the former London Pharmacopoeia.\* This tincture may be used morning and evening, or in the evening only, in the quantity of two or three drops dropped into the eye, or put in with a hair pencil. It at first causes redness and considerable smarting, with watering of the eye; these however soon go off; the pain abates; and the eye is found, in a short time after, evidently less inflamed than it was previous to the application. It sometimes happens that this remedy does not succeed on the first trial, but in the course of a few days its use may again be resorted to. A decoction

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\* Ware, loco citato, p. 51. et seq.

Richter anfangsgrunde der Wundarzneykunst, tom 3, p. 38. Scarpa, *Malattie Degli Occhi*, speaking of this remedy, says, 'I can confirm from my own experience, that what Ware asserts with regard to the use of this remedy, employed prudently, and at the proper time, is by no means exaggerated.'



decoction of poppy heads is often employed with advantage to foment the eye and neighbouring parts, along with the opium.

If in the first stage of the acute Ophthalmia, it has been necessary to divide the vessels of the conjunctiva, astringent applications cannot be used until the ulceration on it is healed, as they would irritate too much, and bring back the inflammation. At first, the eye should be merely bathed, several times a-day, with a little tepid milk and water, to promote the discharge from the wound of the conjunctiva, and as soon as it is cicatrised, mild astringents may be employed.

Whenever the patient is able to bear a moderate light without inconvenience, every kind of bandage should be removed, except the green shade, and a greater degree of light should be daily admitted into the room, in order to accustom the eye as soon as possible to bear the ordinary light of day ; for experience has shewn that nothing tends more to keep up and to add to the morbid sensibility of the organ of vision, and of course to prolong the disease, than to confine the patient to a dark room longer than the circumstances of the case require. Although in most cases of the Ophthalmia, the remedies already mentioned

mentioned be sufficient to effect the cure of the disease, in the two stages described, yet it not unfrequently happens, from some unfortunate combination of circumstances, that the second stage is so much protracted as to become chronic in the strictest sense of the word, and endanger imperceptibly as it were the total loss of the organ.

This change of the nature of the disease may arise, 1st, From a peculiar sensibility and irritability remaining in the eye, after the acute inflammation is removed ; 2dly, Upon some natural defect of the eye ; and, lastly, On the presence of some peculiar diathesis in the general constitution of the patient.

That the first of these is the cause of the chronic Ophthalmia, we may infer from the discharge resisting the use of astringents and corroborants, which in general are successful in curing the disease, when it proceeds simply from debility of the vessels of the conjunctiva ; and, farther, that during the use of these remedies, the disease is rather exasperated. The patient complains of a sense of weight and difficulty in raising the upper eye-lid ; the eyes are easily fatigued by reading at candle-light, or by exposing them to a brighter light than they have been accustomed

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ed to ; if, in addition to these symptoms, the patient is of a slender irritable habit of body, is subject to partial or general spasmodic affections, there can be little doubt that the Ophthalmia is protracted by the sensibility of the eyes and a general nervous habit.

In this case, the use of a generous nourishing diet, with a moderate allowance of wine, is very beneficial, along with general cold bathing, and country air ; internally, tonics and bitters are often useful, conjoined with the means just mentioned. The patient must beware of straining the eyes both during the cure and subsequent to it ; and he ought always to read or work with the same degree of light, as too feeble a light is equally hurtful as too strong a one.

With regard to the other disorders of the eye, of which the chronic Ophthalmia is the consequence ; besides the presence of tumours pressing upon the eye, or of a foreign body under the eyelid overlooked by the surgeon, we frequently find it to arise from a total or partial inversion of the cilia, an ulceration of the cornea, tinea of the lids, or a vitiated state of the secretion of the meibomian glands, and sometimes the morbid enlargement of the cornea or eyeball.

In all these cases, the cure must be directed to the removal of the primary disease.

Of the last species of the chronic Ophthalmia, or those connected with some constitutional affection, the most prevalent are the scrophulous, variolous, and morbillous.

It has long been a desideratum in medicine to discover a remedy for the cure of the Scrophula: and although the most celebrated physicians have employed themselves on that subject, and have tried the effect of almost every remedy, yet so great is the uncertainty which still prevails, that our knowledge may be considered as rather of a negative kind, that is, that we are only able to point out what may aggravate the disease, and can have hardly any dependence on the remedies which are said to be proper for removing it. As long as this obscurity prevails, our art of curing the Chronic Scrophulous Ophthalmia must necessarily be very limited. Suffice it therefore to remark, that whatever weakens the system in general, such as evacuations of blood, or the use of purgatives, tends to exasperate the disease: food of difficult digestion, intense study, or a sedentary occupation, frequent variations of temperature, and the action of cold air, at the same time  
that



that the eyes are exposed to a bright light, are all extremely hurtful.

On the contrary, the influence of this diathesis may be lessened, and its consequent reaction on the eyes relieved, by the use of what are called detergents, as tartar emetic in small doses, rhubarb and magnesia, &c. ; and if the eyes are not very irritable, tonics may be given internally, as bark, with the addition of powder of valerian or guiac, or preparations of steel, along with sea bathing, a proper diet, and free air and exercise.

As to local applications, every thing emollient or relaxing should be avoided ; gentle stimulants and astringents are the most proper, as weak solutions of white vitriol and camphor, ointments of red precipitate or tutty in such proportions as not to irritate the eye. It sometimes happens in children, that the scrophulous diathesis disappears on their arrival at the age of puberty ; and if they have been affected with this chronic Ophthalmia, it frequently goes off spontaneously at that period.

For the cure of the Variolous and Morbillous Chronic Ophthalmia, in addition to the remedies mentioned for the former species, nothing is more useful than the insertion of a seton in the  
nape

nape of the neck, and small doses of calomel, with the usual precautions of not confining the patient too long to a dark room.

With regard to the Chronic Venereal Ophthalmia, it is properly speaking only an additional symptom of the confirmed lues. It is peculiar to this Ophthalmia that it does not begin with any of the usual marks of inflammation, but in a slow insidious manner without much uneasiness. It has a great tendency to produce opacity of the cornea, causes a relaxation of the conjunctiva, and ulceration of the eye-lids. When very severe, it is accompanied with a painful itchiness, which increases from five o'clock in the afternoon till about midnight; it then gradually diminishes, and disappears about four or five in the morning, and suffers another exacerbation in the afternoon. This course is, however, very general with all the symptoms of confirmed lues. Mercury is the only remedy to be depended on; and it should be employed both so as to affect the system, and as an external application to the eye. One of the best forms for the external application, is a solution of corrosive sublimate, in the proportion of one grain to four ounces of rose water and a little mucilage. The  
unguentum



unguentum citrinum mitius applied to the eye-lids, morning and evening, is also a remedy strongly recommended by the late Dr Cullen\*. It is necessary to be very cautious in the management of the general course of mercury, to conjoin with it the decoction of sarsaparilla or mezereon, and sometimes to intermit it for a time, if the symptoms of the Ophthalmia seem to be aggravated by it.

In the Gonorrhœal Ophthalmia, as has been observed, the symptoms are of the most violent acute nature, and the treatment must be very active and vigorous to prevent the total loss of the organ. From whatever cause it may have arisen, the first indication ought always to be the removal of the inflammation, by the strictest observance of the antiphlogistic regimen, such as copious evacuations of blood both general and local. If there is a chemosis, the conjunctiva ought to be divided freely near the edge of the cornea; blisters should be applied to the temples or over the eye-lids; cooling mucilaginous drinks should be freely used along with pediluvia, and, above all, injections between the lids of plain  
milk

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\* First Lines, Vol. I.

milk and water, or of the aqua camphorata. The patient should be kept in bed, with his head elevated, and the eyes ought to be frequently fomented; and the tarfi should be anointed, especially in the evening, with a little simple ointment, to prevent their adhesion.

At the same time, it will be proper, in the case of total suppression of the discharge from the urethra, to apply emollient applications to the perinæum, to inject warm oil into the urethra, and to introduce into it either a simple bougie, or one besmeared with some irritating fluid.

After the inflammatory symptoms have been subdued (which is indicated by the abatement of the symptoms as in the simple acute Ophthalmia) the emollient applications must be laid aside, and the weak astringents substituted instead of them. One of the best remedies of this sort is the solution of Corrosive Sublimate already mentioned, to be introduced carefully between the eye-lids five or six times a-day; if it is found to be too stimulating, it may be diluted with a little distilled water. The tinctura opii vinosa of the London Pharmacopœia, is also a useful remedy in this stage of the disease, as also ointments of red precipitate or tutty.

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If the Ophthalmia has arisen from the accidental application of the gonorrhoeal matter to the eyes, the same treatment should be followed, except that the remedies for recalling the discharge from the urethra are not necessary.

In the Ophthalmia Purulenta of new born infants, the danger is still greater than in the preceding species, on account of the difficulty of having proper remedies applied on the first appearance of the disease; the antiphlogistic regimen must be rigidly observed; blood ought to be taken freely by means of leeches, or, if in the course of the disease the eye-lids are averted, blood may be taken by scarifying them freely with a lancet. After the bleeding, a blister should be immediately applied to the temple or behind the ear; it will also be proper to purge the child with a little rhubarb and magnesia or senna, and the nurse must be cautioned against filling the stomach too full with milk. The child ought to be kept as cool as possible.

The best external remedy is the aqua camphorata \* properly diluted, to be injected under  
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\* Ware's Chirurgical Observ. Vol. I. p. 134.

Scarpa Malattie Deglj. Occhj. p. 93.

the eye-lid, with a small ivory syringe, every two or three hours. Another remedy, which I have seen used with very great advantage \*, is the *solutio lapidis divini* †, in the proportion of from two to ten grains to an ounce of water. If these remedies succeed, in the course of about two weeks the puriform discharge diminishes, and the swelling of the eye-lids is so much abated as to allow the state of the eye to be examined. If there is any dimness of the cornea, the tincture *thebaica* may be used; and if that should fail, the ointment of red precipitate may be tried. If the child is otherwise unhealthy, calomel may be given for some weeks in small doses.

It not unfrequently happens, after long continued inflammations of the eye, that there are a number of enlarged blood-vessels on the conjunctiva, sometimes extending over the cornea, which, notwithstanding the long continued use of astringent applications, still continue to admit the red blood, and are very apt to bring on opacity

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\* Beer, in his *Clinical Practice*.

† See *Plenk's Pharm. Chirurgica*, p. 231.



city of the cornea. The best and most effectual mode of cure is the division of these vessels, by laying hold of them with a fine pair of forceps, and cutting off a portion of the conjunctiva on which they run close to the edge of the transparent cornea, afterwards fomenting the eye with any mild emollient. Astringent applications must be carefully avoided after this excision, as they invariably renew the inflammation.

The Ophthalmia sometimes becomes periodical. It either intermits entirely and returns again, or it suffers an exacerbation at stated periods. To the first only belongs, properly speaking, the name of periodical. The cure is very different according to the cause which produces it. If it is connected with the presence of worms in the stomach or intestines, it can only be cured by their removal. It very often has an intimate connection with the suppression of the menstrual or hæmorrhoidal flux. The cure in these cases, as in every other where a cause can be assigned, should be directed to the renewal of these evacuations.

If such causes have been removed, and if the disease still continues, or if no evident cause can

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be discovered, recourse must be had to remedies against the periodic nature of the disease. The most approved of these are the corrosive sublimate and Peruvian bark, but they both require to be employed with considerable caution. The dose of the former is about a quarter of a grain every evening, dissolved in some barley-water or water-gruel. The bark has been found sometimes serviceable given in large doses at small intervals; but that mode ought to be followed with great caution, as it often increases the inflammation. A dose of two scruples or a drachm given three or four times a-day is preferable, and it sometimes succeeds when combined with the corrosive sublimate.

Having thus described the different varieties of Ophthalmia, it may be proper to remark, that when no evident cause is discovered, it may often arise from the peculiar habit of the body. If the patient is young and plethoric, and of an active disposition; if he indulges in a rich nourishing diet, and drinks freely, the cure may be obtained by restricting him to a spare diet, using occasionally cooling purges, and sometimes even a general evacuation of blood. If, however, he

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is pale and weakly, and of an inactive indolent disposition, a moderately nourishing diet and the use of tonics, general cold bathing, moderate exercise, and avoiding cold moist air, contribute greatly to restore the tone of the system, and to remove or prevent the recurrence of the disease.

FINIS.



